CLAIMS

What is claimed is:

1. A fiber optic module comprising:

a pull-lever actuator to disengage and withdraw the fiber optic module from a cage assembly; and

one or more electro-optic transducers to convert optical signals into electrical signals or electrical signals into optical signals.

2. The fiber optic module of claim 1 wherein,

the pull-lever actuator is activated to disengage and withdraw the fiber optic module by a single downward pull action.

3. The fiber optic module of claim 1 wherein,

the pull-lever actuator to lever a release latch and pull out on the fiber optic module.

4. The fiber optic module of claim 3 further comprising:

a catch to engage the release latch of a cage to retain the fiber optic module therein.

5. The fiber optic module of claim 1 further comprising:

one or more electrical contacts to couple to one or more electrical contacts of a host printed circuit board.

6. The fiber optic module of claim 1 further comprising:

an edge connection of a printed circuit board with one or

more electrical contacts to couple to an edge connector of a host printed circuit board.

7. The fiber optic module of claim 1 wherein,
the fiber optic module is an SFP fiber optic module and the cage assembly is an SFP cage assembly.

8. The fiber optic module of claim 1 wherein,
the pull-lever actuator includes an EMI shield to contain EMI emissions.

9. The fiber optic module of claim 1 wherein,
the pull-lever actuator includes
a lever arm to lever between the fiber optic module and the cage assembly to release a hook of the fiber optic module from a latch of the cage assembly.

10. The fiber optic module of claim 1 wherein,
the pull-lever actuator includes
a pull grip,
a lever arm coupled to the pull grip,
an EMI shield coupled to the lever arm, and
grounding tabs coupled to the EMI shield.

11. The fiber optic module of claim 1 wherein,
the pull-lever actuator includes
a pull grip having dimples to prevent slippage of a user's grip on the pull-lever actuator.

12. The fiber optic module of claim 1 wherein,
the pull-lever actuator includes
a pull ring to allow a user's finger to pull down and out on the pull-lever actuator.

13. The fiber optic module of claim 1 wherein,
the pull-lever actuator is formed of a conductive material.

14. The fiber optic module of claim 13 wherein,
the pull-lever actuator is formed of metal.

15. A pull-lever actuator for fiber optic modules having one or more electro-optic transducers, the pull-lever actuator comprising:
a pull grip to allow a user to grip a first end of the pull-lever actuator;
a lever arm coupled to the pull grip, the lever arm to lever between the fiber optic module and a cage assembly to release a hook of the fiber optic module from a latch of the cage assembly;
an EMI shield coupled to the lever arm at a second end of the pull-lever actuator, the EMI shield to contain EMI emissions; and
grounding tabs coupled to the EMI shield, the grounding tabs to provide a grounding link between the EMI shield and the cage assembly.

16. The pull-lever actuator of claim 15 wherein,
the pull-lever actuator is activated to disengage and

withdraw the fiber optic module from the cage assembly by a single downward pull action.

17. The pull-lever actuator of claim 15 wherein,
the pull grip has dimples.

18. The pull-lever actuator of claim 15 wherein,
the pull-lever actuator is formed of metal.

19. The pull-lever actuator of claim 15 wherein,
the fiber optic module is an SFP fiber optic module and the cage assembly is an SFP cage assembly.

20. A fiber optic module comprising:
means for converting between optical signals and electrical signals; and
means for disengaging and withdrawing the fiber optic module from a cage assembly using a downward pull.

21. The fiber optic module of claim 20 further comprising;
means for shielding electromagnetic radiation.

22. The fiber optic module of claim 20 further comprising;
means for grounding the means for shielding electromagnetic radiation.

23. A method to withdraw a fiber optic module from a cage, the method comprising:

providing a pull-lever actuator for the fiber optic module;

pushing down on an end of the pull-lever actuator to lever a latch and release a catch; and

pulling out on the end of the pull-lever actuator to withdraw the fiber optic module from the cage.

24. The method of claim 23 wherein,

the fiber optic module includes a hook to engage the catch of the latch of the cage when inserted therein and

the pushing down of the end of the pull-lever actuator levers the latch so the catch is disengaged from the hook.

25. The method of claim 23 wherein,

the pushing down and pulling out on the end of the pull-lever actuator is by one motion.

26. A method to withdraw a fiber optic module from a cage, the method comprising:

providing a lever actuator and a pull actuator for the fiber optic module;

pushing down on an end of the lever actuator to lever a latch and release a catch; and

pulling out on an end of the pull actuator to withdraw the fiber optic module from the cage.

27. The method of claim 26 wherein,

the fiber optic module includes a hook to engage the catch of the latch of the cage when inserted therein and

the pushing down of the end of the lever actuator levers the latch so the catch is disengaged from the hook.

28. The method of claim 26 wherein,

the pulling out on the end of the pull actuator withdraws the fiber optic module.

29. A fiber optic module comprising:

a lever actuator to disengage the fiber optic module from a cage assembly;

a pull actuator to withdraw the fiber optic module from the cage assembly; and

one or more electro-optic transducers to convert between optical signals and electrical signals.

30. The fiber optic module of claim 29 wherein,

the lever actuator to lever a latch of a cage and to release a catch of the fiber optic module.

31. The fiber optic module of claim 30 wherein,

the catch to engage the latch of the cage to retain the fiber optic module therein.

32. The fiber optic module of claim 29 further comprising:

an edge connection of a printed circuit board with one or more electrical contacts to couple to an edge connector of a host printed circuit board.

33. The fiber optic module of claim 29 wherein,

the fiber optic module is an SFP fiber optic module which can be inserted and withdrawn from an SFP cage.

34. The fiber optic module of claim 29 wherein,

the pull actuator for a user to pull out on the fiber optic module and to withdraw it from a cage.